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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,928	10/16/2001	Darren Duane Cofer	1100.1152101 (H0002064)	6322
128	7590	12/14/2004	EXAMINER	
HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			KASSA, YOSEF	
			ART UNIT	PAPER NUMBER
			2625	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,928

Applicant(s)

COFER ET AL.

Examiner

YOSEF KASSA

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/16/02</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nichani et al (U.S. patent 6,469,734), and further in view of Ito et al (U.S. Patent 6,088,468).

With regarding to claim 1, Nichani et al discloses monitoring at least a portion of the border region of the area of interest for breach by an object (see col. 5, lines 45-55 and col. 6, lines 31-38).

Nichani et al did not explicitly call of monitoring at least a portion of the interior region of the area of interest for the object after the object breaches the borer. However, at the same field of endeavor, Ito et al teach this feature (see col. 11, lines 1-15). At the time of invention was made it would have been obvious to an ordinary skill in the art to incorporate the teaching of Ito et al sensing an object within an imaging field into Nichani et al system. The motivation doing so is to provide the process of sensing an image object which located within visual field of an image device.

With regarding to claim 2, Nichani et al discloses ceasing monitor the interior region of the area or interest after the object leaves the area of interest (note that after

the object passes through the camera continue monitoring the area see col. 4, lines 33-37); and

Continuing to monitor at least a portion of the border region of the area of interest after the object leaves the area of interest (which reads on the process of continue capture the area of safety zone see col. 4, lines 9-16).

With regarding to claim 3, Nichani et al discloses wherein the interior region of the area of interest is not monitored until the object no longer breaches the border region of the area of interest (note that the process of determining if there is a shadow/object change in the feature of the vacant background in the safety zone see col. 4, lines 13-24).

Claim 4 is similarly analyzed as claim 2.

With regarding to claim 5, Nichani et al discloses further comprising the step of providing a safety output when the border region is breached by the object (see col. 5, lines 1-5).

With regarding to claim 6, Nichani et al discloses wherein the safety output disables a piece of equipment located in the area of interest (see col. 10, lines 41-56).

Claim 7 is similarly analyzed as claim 6.

With regarding to claim 8, Nichani et al discloses wherein the border region comprises a continuous region (see Fig. 2, item 103 item L is a continuous region).

With regarding to claim 9, Nichani et al discloses wherein the border region comprises an interrupted region (which reads on the change feature of the background in the safety zone or target area see col. 4, lines 19-32).

Claim 10 is similarly analyzed as claim 2.

Claim 11 similarly analyzed as claims 1-9.

With regarding to claim 12, Nichani et al discloses wherein the one or more border retios include a reference marking (see col. 6, lines44-47).

Claims 13, 15 and 16 are similarly analyzed as claim 12.

With regarding to claim 14, Nichani et al discloses wherein the step of analyzing the one or more border regions of the captured image comprises the step of comparing the one or more border regions of the capture image to one or more corresponding regions of a reference image (see col. 4, lines 19-24).

With regarding to claim 17, Nichani et al discloses wherein the predetermined pattern determines a minimum size of the objects to be detected (see col. 9, lines 51-58).

With regarding to claim 18, Nichani et al discloses further comprising the step of storing the capture image when an object has entered the area of interest (see col. 4, lines 39-54).

With regarding to claim 19, Nichani et al discloses further comprising the step of viewing the stored capture images at a later time (see col. 4, lines 55-61).

With regarding to claim 20, Nichani et al discloses wherein the reference iamge is taken in response to a change in one or more conditions in the area of interest (see col. 4, lines 19-24).

With regarding to claim 21, Nichani et al discloses wherein the reference image is taken at a set time interval (see col. 4, lines 55-61).

Claim 22 is similarly analyzed as claim 14.

With regarding to claim 23, Nichani et al discloses wherein at least one comparison detects relatively immediate changes, and at least one comparison detects accumulated changes (see col. 4, lines 44-61).

Claims 24, 26 and 11 are similarly analyzed as claim 1.

With regarding to claim 25, Nichani et al discloses wherein the image capturing devices are video cameras (see col. 4, lines 33-37).

Claim 26 and 29 are similarly analyzed as claim 25.

Claims 27, 28, 30 and 31 are similarly analyzed as claims 1-9.

Claim 26 and 29 are similarly analyzed as claim 25.

With regarding to claim 32, Nichani et al discloses wherein the first minimum size is smaller than the second minimum size (which reads on the process of comparing two images see col. 4, lines 19-25).

Claim 33 is similarly analyzed as claim 32.

With regarding to claim 34, Nichani et al discloses wherein the interior region is defined to include the border region (see col. 4, lines 39-32).

With regarding to claim 35, Nichani et al discloses wherein the interior region is defined to exclude the border region (see col. 4, lines 33-37).

Claims 36-41 are similarly analyzed as claims 1-9.

Other Prior Art Cited

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. (5,731,832) to Ng disclose apparatus and method for detecting motion in a video signal.

US Patent No. (5,999,898) to Huang et al disclose system and method for detecting and analyzing a queue.

US Patent No. (5,721,692) to Nagaya et al discloses moving object detection apparatus.

US Patent No. (4,458,266) to Mahoney disclose video movement detector.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (703) 306-5918. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

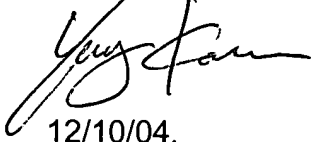
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BHAVESH MEHTA can be reached on (703) 308-5246. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communication and (703) 872-9306 for after Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PATENT EXAMINER

Yosef Kassa

A handwritten signature in black ink, appearing to read 'Yosef Kassa', written over the printed name.

12/10/04.